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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,620	01/30/2006	Matthias Winkel	ZAHFRI815US	7373
20210 7590 10/19/2010 DAVIS & BUJOLD, P.L.L.C. 112 PLEASANT STREET CONCORD, NH 03301				
EXAMINER				
PANG, ROGER L				
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3655				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/566,620

**Applicant(s)**

WINKEL ET AL.

**Examiner**

Roger L. Pang

**Art Unit**

3655

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-32, 34-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-32 and 34-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### **DETAILED ACTION**

The following action is in response to the RCE field for application 10/566,620 on September 9, 2010.

#### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed subject matter of claims 23-32 and 34-36 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. *Currently there are no drawings in the application.*

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Again, applicant lacks antecedent basis in the specification for applicant's definition of "a coasting mode."

Throughout the specification, applicant does not once mention a "coasting mode." Applicant appears to describe a scenario very similar to the cited coasting mode that is known in the art in paragraphs 10 and 12 of the original specification, but never refers to it as a "coasting mode." Applicant has placed special emphasis on a set of limitations that are associated with the claimed "coasting mode," but these limitations are not explained in the specification.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 23-32, and 34-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With regard to claims 23, 34 and 36, applicant claims that the predetermined threshold speed is greater than zero. The speed of zero is never precluded from being the threshold speed in the original specification. Applicant also claims that the predetermined threshold speed is

determined by the second transmission gear ratio. This is also never stated in the original specification. In paragraph 17 (of the original specification), applicant only states that the threshold speeds are dependent upon respective gear ratios of individual gear stages.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 23-32 and 34-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 23, in step (B2), applicant is claiming that the first downshift if "terminating" while the clutch remains disengaged. This is unclear, as it is believed that the first downshift is actually "completed" with the clutch remaining disengaged. This would make more sense given dependent claim 24. Unless applicant is claiming a skip shift or actually stopping the first down shift while leaving the clutch open and then performing the first down shift again, this claim terminology does not make sense. Claim 34 suffers from the same problems.

With regard to claim 36, in step (b1), applicant claims a "re-engaging the with the next lower transmission gear ratio." It is suggested applicant insert --clutch-- after "re-engaging the." In step (b2), applicant claims "maintaining the clutch transmission,". It is suggested that applicant delete "transmission,". Also, in this claim, it is believe that the term "terminate" is used incorrectly. In this claim, it is claimed that the transmission is in the next lower gear in step (b2) which signifies a "completion" and not a "termination." Also, claims d1 and d2 do not seem to follow each other sequentially, even though they seem to be claimed that way. *Given steps*

*(b1) and (b2) of claim 36, perhaps the term “terminating” should be changed to “completing” in all the claims?*

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23-28, 30-31, and 34-36 (**as best understood**) are rejected under 35 U.S.C. 102(b) as being anticipated by Nitta '275. With regard to claim 23, Nitta teaches a method of operating an automatic transmission 10 of a motor vehicle having a clutch 15 located between a drive motor 11 and the transmission, the method comprising the steps of: (a) carrying out a first downshifting operation from a first, higher transmission gear ratio to a second, lower transmission gear ratio during a coasting mode while the clutch is disengaged and without any engine braking of the vehicle S6; and one of: (b 1) terminating the first downshifting operation by engagement of the clutch S8, if a speed of the vehicle is above a predetermined threshold speed (on speed map) greater than zero determined transmission gear ratio S4; and (b2) completing the first downshifting operation while maintaining the clutch in a disengaged state if the speed of the vehicle is below the predetermined threshold speed S6. With regard to claim 24, Nitta teaches the method, wherein step (b2) further comprising the step of carrying out a second downshifting operation, while the clutch remains continually disengaged, if a reasonably great probability exists that a driver has a desire for positive drive torque as well as desiring uninterrupted travel

S5/S6. With regard to claim 25, Nitta teaches the method, further comprising the step of determining the desire for positive drive torque by an indicator (S5 or Throttle). With regard to claim 26, Nitta teaches the method, further comprising the step of indicating the desire for the positive drive torque by one or more of: releasing operative brakes of the vehicle, deflecting an activation lever for a direction of travel, and using a steering angle of a vehicle steering mechanism S5. With regard to claim 27, Nitta teaches the method, further comprising the steps of indicating the desire for the positive drive torque by using a steering angle of a vehicle steering mechanism and determining a driver's desire for the positive drive torque by way of overstepping of the steering angle as compared to a predetermined steering angle S5. With regard to claim 28, Nitta teaches the method, further comprising the step of using, for a determination of the probability of the driver's wish for the positive torque, two or more of named indicators (steering/throttle). With regard to claim 30, Nitta teaches the method, further comprising the step of engaging the clutch S8 when the speed of the vehicle is above the predetermined threshold speed, to terminate the downshifting operation, only when a power control member of the motor vehicle is activated (throttle on shift map; S4). With regard to claim 31, Nitta teaches the method, further comprising the step of always terminating engagement of a gear of the automatic transmission at the end of the downshifting operation with a disengaged clutch when the current gear of the automatic transmission is a starting gear (no where else to downshift on the shift map; S4). With regard to claim 34, Nitta teaches a method of operating an automatic transmission 10 of a motor vehicle, the method comprising the steps of: (a) carrying out a first downshifting operation from a first higher transmission gear ratio to a second, lower transmission gear ratio during a coasting mode of the automatic transmission,

without any engine braking of the vehicle, by: disengaging a clutch located between the automatic transmission and a vehicle engine S6; shifting from the first, higher transmission gear to the second, lower transmission gear ratio in the automatic transmission; and one of: (b1) terminating the first downshifting operation by engaging the clutch S8 if a speed of the vehicle is above a predetermined threshold speed determined by the transmission gear ratio so that engine compression influences the vehicle (S4); and (b2) completing the first downshifting operation while maintaining the clutch in a disengaged state if the speed of the vehicle is below the predetermined threshold speed (S6); (c) if the vehicle, speed continues to decrease (on shift map; S4), carrying out a second downshifting operation of the automatic transmission by disengaging the clutch, by downshifting from the lower gear to a first next lower gear in the automatic transmission S6 and by one of: (d1) terminating the second downshifting operation by engaging the clutch S8 if a speed of the vehicle is above the predetermined threshold speed so that engine compression influences the vehicle S4; and (d2) completing the second downshifting operation, while maintaining the clutch in the disengaged state if the speed of the vehicle is below the predetermined threshold speed (S6); and determining a driver desire for positive drive torque (throttle or steering); and terminating the second downshifting operation by engaging the clutch S8. With regard to claim 35, Nitta teaches the method, further comprising the step of determining the driver desire for positive drive torque by identifying at least one of: releasing operative brakes of the vehicle, deflecting an activation lever for a direction of travel; and a predetermined steering angle of a vehicle steering mechanism S5; and activation of a power control member. With regard to claim 36, Nitta teaches a method of operating an automatic transmission 10 of a motor vehicle, the method comprising the steps of: (a) entering a vehicle



coasting mode, without any engine braking, by disengaging a clutch located between a vehicle drive motor and the transmission; and performing a first downshift from a higher transmission gear ratio to a next lower transmission gear ratio of the automatic transmission S6; and one of: (b1) re-engaging the clutch S8 with the next lower transmission gear ratio to complete the first downshift if a speed of the vehicle is above a predetermined threshold speed determined by the transmission gear ratio S4; and (b2) maintaining the clutch, in a disengaged state with the next lower gear to terminate the first downshift if a speed of the vehicle is below the predetermined threshold speed S6; and (c) in the event that the speed of the vehicle continues to decelerate (on shift map), then: disengaging the clutch, if the clutch is engaged; performing a second downshift from the next lower transmission gear ratio to a second next lower transmission gear ratio S6, (d1) re-engaging the clutch S8 with the second next lower transmission gear ratio to complete the second downshift if a speed of the vehicle is above the predetermined threshold speed S4; and (d2) maintaining the clutch in the disengaged state with the second next lower transmission gear ratio to complete the second downshift if a speed of the vehicle is below the predetermined threshold speed S4.

### ***Response to Arguments***

The issue with regard to the "coasting mode" and a threshold speed greater than zero has been addressed in the previous rejections/objections.

Applicant has placed special emphasis on many limitations that have not been clearly defined. Also, applicant should be careful with the "***one of***" limitations (see claims 23, 34, 36), as many of the claimed limitations are not required due to that phrase and how the claims can be interpreted (given what claims/steps follow "one of").

It appears that the "one of" stipulation might be a translational difference for an English "If/then" step. The office has included the following suggestions to place this application in condition for allowance:

1) Without adding new matter, define "coasting mode" given the original specification. It is believed that applicant can just insert --(known as a coasting mode)-- after "This mode of driving" in paragraph 12. Please note that this does not preclude actually coming to a standstill (see paragraph 10). It only states that the vehicle is rolling with an open clutch.

2) Remove all new matter in the claims. Please see the original specification for the limited disclosure.

3) Correct all possible translational inaccuracies (i.e. "terminating" a shift).

4) Create a flow chart(s) for the drawings (no new matter).

5) Amend the claims to reflect the flow chart(s). Claim the steps, possibly defining a test for the variables, and then following with if/then limitations. Currently applicant's claims do not require many specifics (in their current form). This is why Nitta can broadly read on most of the claims (as understood).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hoshiya, Stasik, Newbiggin, and Kishi have been cited to show similar transmission controls.

#### FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. The central facsimile number is (571) 273-8300. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

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(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roger L. Pang whose telephone number is 571-272-7096. The examiner can normally be reached on 5:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Le can be reached on 571-272-7092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roger L Pang/  
Primary Examiner, Art Unit 3655

Roger L Pang  
Primary Examiner  
Art Unit 3655

October 16, 2010